HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400

10|24|0~

PATENT APPLICATION A

ATTORNEY DOCKET NO. 10002549-1

JC927 U.S. PTO
09/694546
10/23/00

IN THE U.S. PATENT AND TRADEMARK OFFICE
Patent Application Transmittal Letter

COMMISSIONER FOR PATENTS
Washington, D.C. 20231

Sir:

Transmitted herewith for filing under 37 CFR 1.53(b) is a(n): (**X**) Utility ( ) Design

(**X**) original patent application,

( ) continuation-in-part application

INVENTOR(S): **Kenneth W. Crangle et al**

TITLE: **Direct Printing Of Contents Of A Universal Resource Locator**

Enclosed are:

(**X**) The Declaration and Power of Attorney. (**X**) signed ( ) unsigned or partially signed

(**X**) __7__ sheets of drawings (one set) ( ) Associate Power of Attorney

( ) Form PTO-1449 (**X**) Information Disclosure Statement and Form PTO-1449

( ) Priority document(s) ( ) (Other) _____ (fee $_____)

CLAIMS AS FILED BY OTHER THAN A SMALL ENTITY				
(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) TOTALS
TOTAL CLAIMS	20 — 20	0	X $18	$ 0
INDEPENDENT CLAIMS	4 — 3	1	X $80	$ 80
ANY MULTIPLE DEPENDENT CLAIMS	0		$270	$ 0
BASIC FEE: Design ($320.00); Utility ($710.00)				$ 710
TOTAL FILING FEE				$ 790
OTHER FEES				$
TOTAL CHARGES TO DEPOSIT ACCOUNT				$ 790

Charge $__790__ to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16, 1.17, 1.19, 1.20 and 1.21. A duplicate copy of this sheet is enclosed.

"Express Mail" label no. __EL497067193US__

Date of Deposit __Oct 23, 2000__

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Washington, D.C. 20231

By _[signature]_

Typed Name: **Raymond A. Jenski**

Respectfully submitted,

Kenneth W. Crangle et al

By _[signature]_

Raymond A Jenski

Attorney/Agent for Applicant(s)
Reg. No. **31,267**

Date: **Oct 23, 2000**

Telephone No.: **(541) 715-8441**

Rev 10/00 (TransNew)

- Attach as First Page to Transmitted Papers -

DIRECT PRINTING OF CONTENTS OF A UNIVERSAL RESOURCE LOCATOR

5 BACKGROUND

The Internet started as a cooperative research effort of the United States Federal Government known as the Advanced Research Project Agency Network (ARPAnet). The ARPAnet tied universities and research and development organizations to the U.S. military establishment. More recently, the Internet has 10 extended its use commercially and internationally. It is the world's largest computer network.

A Universal Resource Locator (URL) address is an Internet address. A URL address consists of a string expression that designates a resource (referred to herein as a URL page) on the Internet. For example the resource is a particular file on a 15 computer connected to the Internet.

Web browsers such as Netscape Navigator browser available from Netscape, and Internet Explorer browser available from Microsoft Corporation use URL addresses to access resources (URL pages) on the Internet. Once accessed, these resources (URL pages) can be printed from the web browser using a print command.

20 The Internet Explorer browser includes a history window that lists the names and URL addresses of recently visited resources (URL pages). It is possible to "drag and drop" an entry in the history window to a computer desktop. Selecting the resulting icon results in the Internet Explorer browser accessing the resource (URL page) and displaying the URL page within a window of the Internet Explorer browser.

25 While currently available web browsers provide for accessing and printing of URL pages, it is always desirable to provide more convenient ways to access and print information from the Internet.

SUMMARY OF THE INVENTION

30 In accordance with the preferred embodiment of the present invention, a URL page is printed by a computing system. When a reference to a URL address is dragged and dropped upon a print icon, the URL page is accessed from the Internet. The URL page is then printed on a printer. When the URL page is accessed and printed, the URL page is not displayed to a user of the computing system. The 35 reference to the URL address can be the URL address itself or any label or other combination of characters that is used to identify the URL address.

In one preferred embodiment of the present invention, when the URL page is unchanged from a time when the URL page was previously printed by the computing system, the user of the computing system is notified and given an opportunity to cancel printing.

5   For example, the reference to the URL address is dragged from a subscription list available as part of a resource utilized by a print delivery Internet site. Alternatively, the reference to the URL address is dragged from URL addresses listed in a user-generated file. For example, URL addresses listed in a user-generated file may be selected from a browser history window or a browser history file. The

10   reference to the URL address can also be dragged directly from URL addresses listed in a browser history window or a browser history file. Alternatively, the reference to the URL address can be contained within a URL print icon or contained within a browser shortcut icon on the desktop. Unless the URL addresses are moved directly from an open browser window, it is not necessary for the browser to be open or any

15   browser window to be open when the printing is performed.

In an alternative method for printing a URL page, when a reference to the URL address for the URL page is dragged and dropped upon a desktop for a computing system, a special icon representing the URL page address is created on the desktop. Upon a user performing a function to activate the special icon, the URL

20   page is printed.

For example, the special icon is activated by double clicking on the special icon. Alternatively, the special icon is activated by dragging and dropping the special icon on a print icon. The special icon can also be activated by selecting the special icon and then selecting a print command from a menu or using short-cut keys on the

25   keyboard.

Similar to the previously described method, the printing can be performed without displaying the URL page to the user of the computing system. Also, when the URL page is unchanged from a time when the URL page was previously printed by the computing system, the user of the computing system can be notified and given

30   an opportunity to cancel printing. The reference to the URL address can be, for example, dragged from a subscription list available as part of a resource utilized by a print delivery Internet site, dragged from URL addresses listed in any file, dragged from URL addresses listed in a browser history window or file or obtained using a URL print icon or a browser shortcut icon.

35   The present invention provides for a convenient shortcut that allows efficient printing of a URL page.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows a simplified block diagram of a computer connected to a printer and to the Internet.

Figure 2 illustrates printing the contents of a URL page by dragging and dropping the URL address from a subscription list to a printer icon in accordance with a preferred embodiment of the present invention.

Figure 3 a user list contains a list of the name and URL address of URL pages in accordance with a preferred embodiment of the present invention.

Figure 4 illustrates printing the contents of a URL page by dragging and dropping the URL address from a web browser history list to a printer icon in accordance with a preferred embodiment of the present invention.

Figure 5 illustrates efficient provision for printing the contents of a URL page by dragging and dropping the URL address from a subscription list, client history list or web browser history list to the desktop to create a URL printer icon in accordance with a preferred embodiment of the present invention.

Figure 6 is a flowchart that describes a printing process in accordance with a preferred embodiment of the present invention.

Figure 7 shows a dialog box being displayed as a part of the printing process in accordance with a preferred embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Figure 1 shows a computer system 51 connected to a printer 52 and to the Internet 53. For example, computer system 51 is accessing a web page 54 via Internet 53 for the purpose of printing web page 54. There are often times when a user of computer system 51 would like to receive the latest printout from a URL page. Seldom can it be predicted accurately when a URL page will be updated, so scheduled printing may not be the best solution.

In preferred embodiments of the present invention, dragging and dropping a reference to a URL address onto a special print icon located on the desktop results in printing the contents of that URL page. While in the discussion below the reference to the URL address is described as the URL address itself, the reference to the URL address can also be any label or other combination of characters that is used to identify the URL address. For example, the URL address can be the title of a web page or a user-given name that identifies the URL address. The URL address can reference any site on the Internet.

For example, Figure 2 shows a web browser window 11 opened on a display screen 10. Web browser window 11 includes a browser control area 12 and an area

13 that displays a current URL page.

A subscription list 14 containing subscription entries may be, for example, the subscription list could be the Delivery Manager window for the HP Instant Delivery system. Each subscription entry includes, for example, the name and/or URL address

5 for a URL page to which a user subscribes. Using a cursor 15, the user can drag a subscription entry and drop it on a print icon 16. This results in the URL page designated by the URL address being printed. Printing also can be enabled using a designated combination of key strokes, select a printing function from a menu, etc. Also, while in Figure 2 web browser window 11 is shown open, as long as a URL

10 address or another type of reference to a URL address resides in a file located within computing system 51, it is not necessary that any window of the web browser be open in order to activate the printing nor is it necessary that the web browser be enabled or running.

Likewise, Figure 3 shows web browser window 11 opened on display screen

15 10. Web browser window 11 includes browser control area 12 and a currently displayed URL page 23. A user list 24 contains a list of the name and URL address of URL pages. For example, user file 24 is created by a client that fetches URL pages previously visited by the web browser and stored in a history file, a history list, or a favorites list, etc. Alternatively, user file 24 can be created by a user typing selected

20 URLs directly into user file 24, or by any other way which URL addresses may be entered into a file. Each entry in user file 24 includes the name and URL address for a URL page. Alternatively, each entry contains only the URL address for the URL page. Using cursor 15, the user can drag an entry and drop it on print icon 16. This results in the URL page designated by the URL address being printed.

25 Similarly, Figure 4 shows web browser window 11 opened on display screen 10. Web browser window 11 includes browser control area 12 and currently displayed URL page 23. A browser history window 34 contains a list of the name and/or URL address of URL pages. For example, browser history window 34 the history file created by the web browser. Each entry in the browser history window 34

30 includes the name and URL address for a URL page. Using cursor 15, the user can drag an entry and drop it on print icon 16. This results in the URL page designated by the URL address being printed.

Alternatively, dragging and dropping a URL address from one of the sources listed above onto the desktop results in the formation of a URL print icon.

35 This is illustrated by Figure 5. Figure 5 shows web browser window 11 opened on display screen 10. Web browser window 11 includes browser control area 12 and currently displayed URL page 43. A window 44 contains a list of the name

and URL address of URL pages. Window 44 is, for example, a subscription list, a user file, a browser history file or a browser history window, as described above. Using cursor 15, the user can drag an entry and drop it on the desktop represented by unused portions of display screen 10. Doing so results in the creation of a URL print

5   icon 40. A label 41, for example, contains the name and/or URL address of the URL page or a user defined label. Web browser window 11 need not be open when creating URL print icon 40.

When dragging and dropping to the desktop from a browser history list, a key combination (such as holding down the "Shift" key) is used during the operation for

10   some web browsers. This is in order to preserve current functionality of web browsers that allow creation of a "short-cut" icon on the desktop from which the URL page can be accessed by the web browser. When the key combination is used during the drag and drop operation, URL print icon 40 is created. When the key combination is not used, the browser "short-cut" icon is created. In order to print a URL page

15   represented by a browser "short-cut" icon, the browser shortcut icon is dragged and dropped on print icon 16. Alternatively, to print the URL page, the associated browser short-cut icon is selected followed by the selection of a print command, for example, from a menu or using a short-cut combination of keys. Web browser window 11 need not be open when printing browser short-cut icon.

20   When URL print icon 40 is double clicked the URL page is printed on printer 52. The URL page can also be printed using other methods. For example, URL print icon 40 can be dragged and dropped on print icon 16. Also, URL print icon 40 can be selected followed by a print command being selected from a menu or using a short-cut combination of keys.

25   Figure 6 is a flowchart that describes the printing process. This printing process is invoked, for example, whenever a URL page is printed. Alternatively, URL pages can be printed directly without, for example, checking for changes to the URL page.

In a step 61, a print request is received. In a step 62, the URL page to be

30   printed is accessed to determine if any changes to the URL page have been made since last printed by computer system 51. From a step 63, if a change has been made to the URL page since last printed by computer system 51, in a step 64, the URL page is printed. From step 63, if a change has not been made to the URL page since last printed by computer system 51, in a step 65, a dialog box 71 (shown in Figure 7) is

35   presented to the user.

Figure 7 shows dialog box 71. Dialog box 71 informs the user that the selected URL page has not changed since last printed. Dialog box 71 asks whether printing

should continue. No web browser need be active during printing and no URL page need be displayed during printing.

If in a step 66 (shown in Figure 6), the user chooses to continue with printing, in a step 67, the URL page is printed. If in step 66 the user chooses not to continue

5   with printing, in a step 68, the print routine is completed without printing.

The foregoing discussion discloses and describes merely exemplary methods and embodiments of the present invention. As will be understood by those familiar with the art, the invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. Accordingly, the disclosure of the

10   present invention is intended to be illustrative, but not limiting, of the scope of the invention, which is set forth in the following claims.

We Claim:

CLAIMS

1. A method for printing a URL page by a computing system, comprising the following steps:

5   (a) when a reference to a URL address is dragged and dropped upon a print icon performing the following substeps:

        (a.1) accessing the URL page from an Internet network; and,

        (a.2) printing the URL page on a printer;

        wherein substep (a.1) and substep (a.2) are performed without

10   displaying the URL page to a user of the computing system.

2. A method as in claim 1 wherein substep (a.2) includes the following substeps:

    when the URL page is unchanged from a time when the URL page was

15   previously printed by the computing system, so notifying the user of the computing system and giving the user of the computing system an opportunity to cancel printing.

3. A method as in claim 1 wherein in substep (a.1) the reference to the URL address is dragged from a subscription list available as part of a resource utilized by a

20   print delivery Internet site.

4. A method as in claim 1 wherein in substep (a.1) the reference to the URL address is dragged from URL addresses listed in a file.

25   5. A method as in claim 1 wherein in substep (a.1) the reference to the URL address is dragged from URL addresses listed in a browser history window.

6. A method as in claim 1 wherein in substep (a.1) the reference to the URL address is contained within a URL print icon.

30

7. A method as in claim 1 wherein in substep (a.1) the reference to the URL address is contained within a browser shortcut icon.

8. A method for printing a URL page by a computing system, comprising the

35   following steps:

    (a) when a reference to a URL address for the URL page is dragged and dropped upon a desktop for the computing system, performing the following substep:

(a.1) creating on the desktop a special icon representing the URL page address; and,

(b) upon a user performing a function to activate the special icon, performing the following substep;

5   (b.1) printing the URL page.

9. A method as in claim 8, wherein substep (b.1) is performed without displaying the URL page to the user of the computing system.

10   10. A method as in claim 8 wherein substep (b.1) includes the following substeps:

when the URL page is unchanged from a time when the URL page was previously printed by the computing system, so notifying the user of the computing system and giving the user of the computing system an opportunity to cancel printing.

15

11. A method as in claim 8 wherein in step (a) the reference to the URL address is dragged from a subscription list available as part of a resource utilized by a print delivery Internet site.

20   12. A method as in claim 8 wherein in step (a) the reference to the URL address is dragged from URL addresses listed in a file.

13. A method as in claim 8 wherein in step (a) the reference to the URL address is dragged from URL addresses listed in a browser history window.

25

14. A method as in claim 8 wherein in step (b) the special icon is activated by double clicking on the special icon.

15. A method as in claim 8 wherein in step (b) the special icon is activated by

30   dragging and dropping the special icon on a print icon.

16. Storage media that stores software, which when executed performs a method for printing a URL page by a computing system, the method comprising the following steps:

35   (a) when a reference to a URL address is dragged and dropped upon a print icon performing the following substeps:

(a.1) accessing the URL page from an Internet network; and,

(a.2) printing the URL page on a printer;

wherein substep (a.1) and substep (a.2) are performed without displaying the URL page to a user of the computing system.

5   17. Storage media as in claim 16 wherein substep (a.2) includes the following substeps:

when the URL page is unchanged from a time when the URL page was previously printed by the computing system, so notifying the user of the computing system and giving the user of the computing system an opportunity to cancel printing.

10

18. Storage media as in claim 16 wherein in substep (a.1) the reference to the URL address is dragged from one of the following locations:

a subscription list available as part of a resource utilized by a print delivery Internet site;

15   URL addresses listed in a file;

URL addresses listed in a browser history window;

a URL print icon; and,

a browser shortcut icon.

20   19. Storage media that stores software, which when executed performs a method for printing a URL page by a computing system, the method comprising the following steps:

(a) when a reference to a URL address for the URL page is dragged and dropped upon a desktop for the computing system, performing the following substep:

25   (a.1) creating on the desktop a special icon representing the URL page address; and,

(b) upon a user performing a function to activate the special icon, performing the following substep;

(b.1) printing the URL page.

30

20. Storage media as in claim 19 wherein substep (b.1) includes the following substeps:

when the URL page is unchanged from a time when the URL page was previously printed by the computing system, so notifying the user of the computing

35   system and giving the user of the computing system an opportunity to cancel printing.

DIRECT PRINTING OF CONTENTS OF A UNIVERSAL RESOURCE LOCATOR

ABSTRACT OF THE DISCLOSURE

5   A URL page is printed by a computing system. When a reference to a URL address is dragged and dropped upon a print icon, the URL page is accessed from the Internet. The URL page is then printed on a printer. When the URL page is accessed and printed, the URL page is not displayed to a user of the computing system. Also, when a reference to the URL address for the URL page is dragged and dropped upon a

10   desktop for a computing system, a special icon representing the URL page address is created on the desktop. Upon a user performing a function to activate the special icon, the URL page is printed.
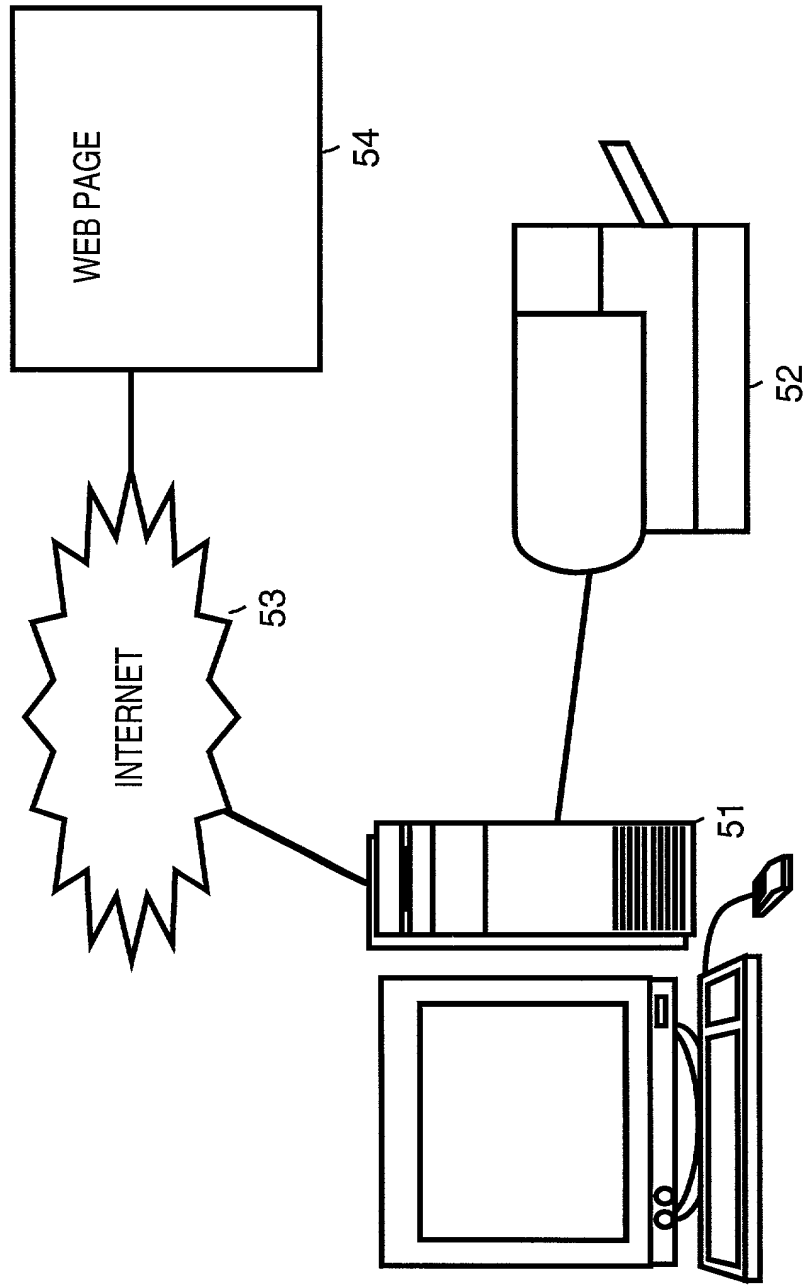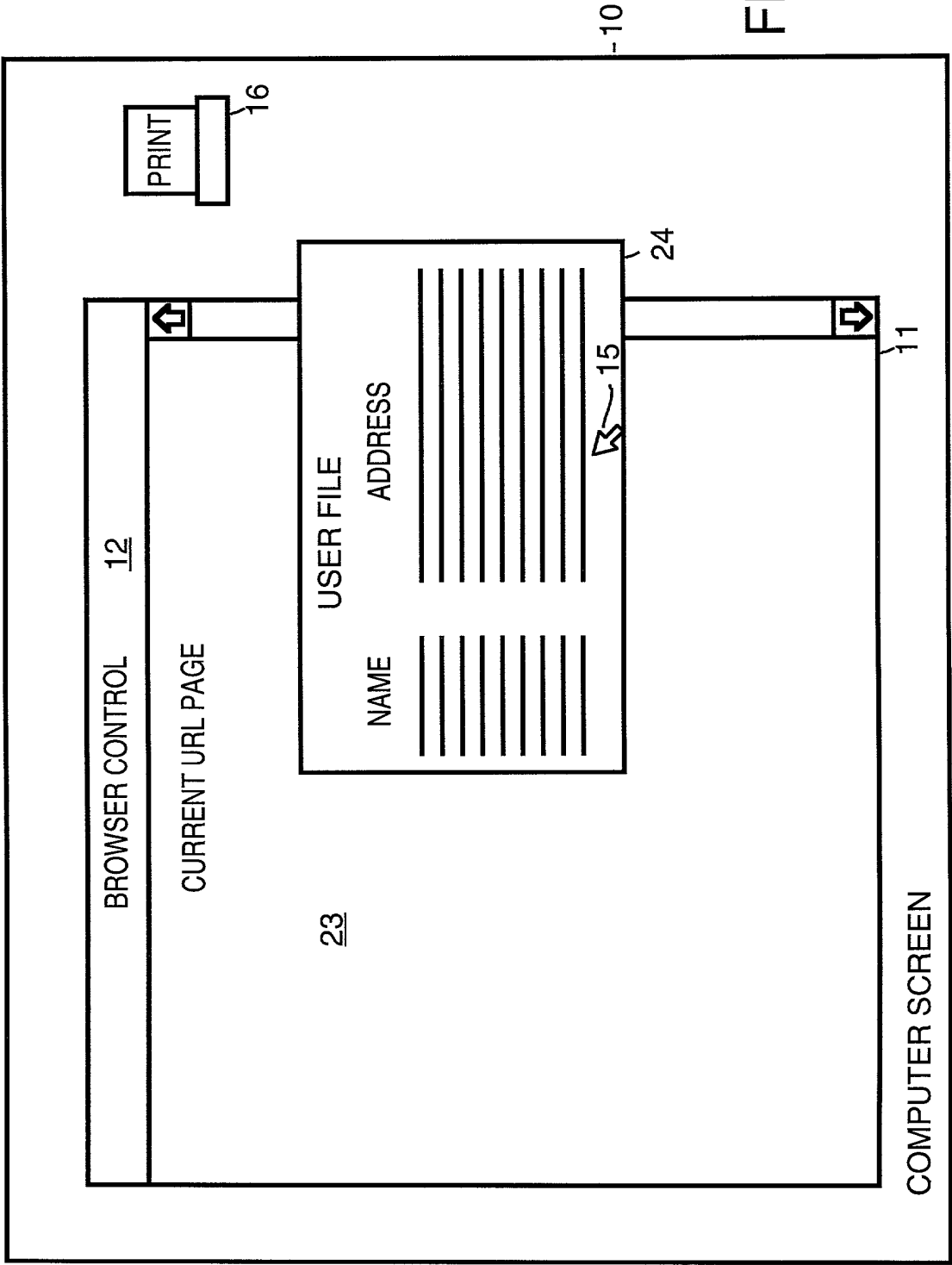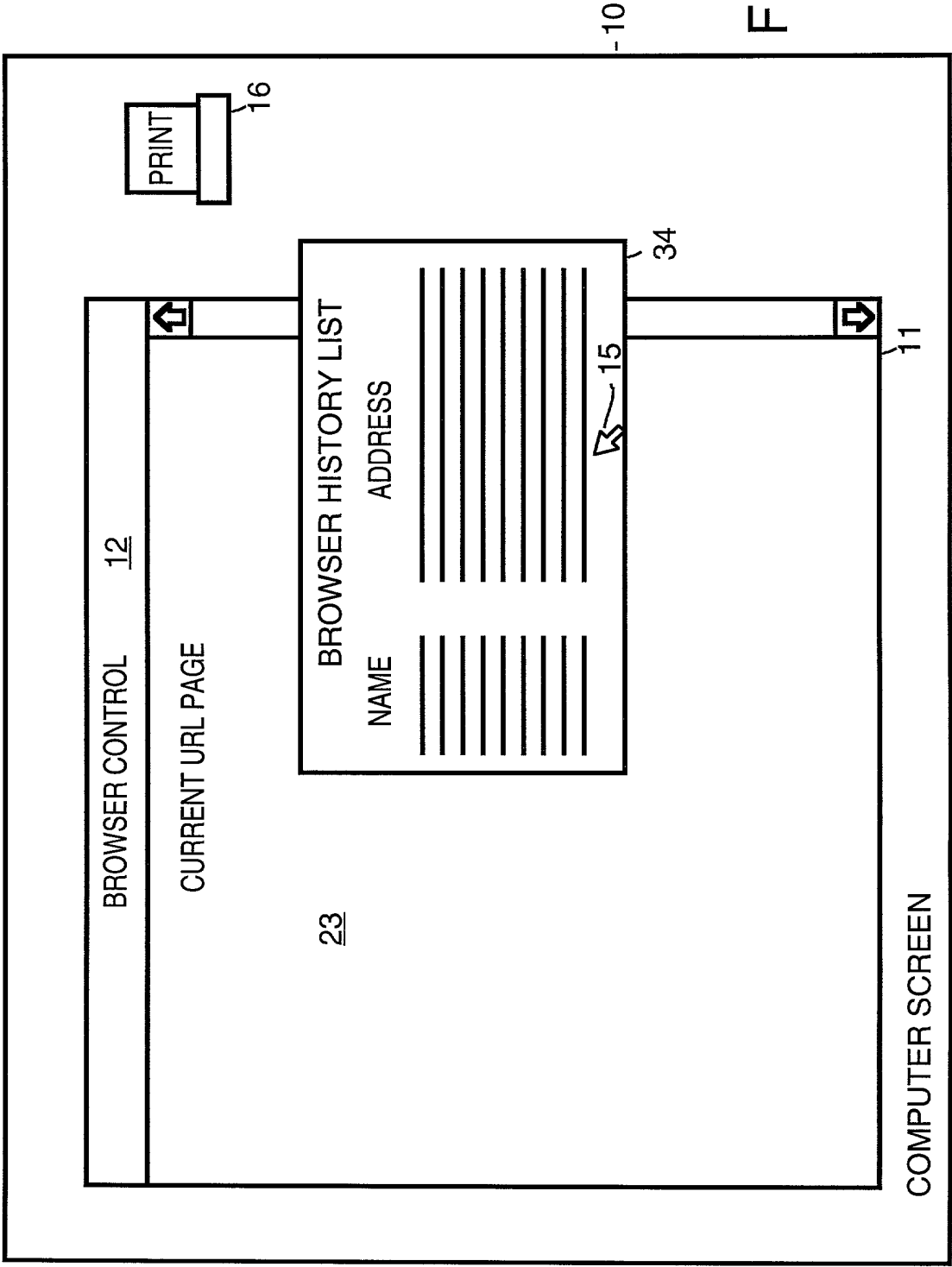
WEB PAGE

54

INTERNET

53

52

51

FIGURE 1

FIGURE 2

FIGURE 3

PRINT — 16

BROWSER CONTROL   12

CURRENT URL PAGE

USER FILE

NAME   ADDRESS

23

24

15

11

10

COMPUTER SCREEN

FIGURE 4

FIGURE 5

RECEIVE REQUEST TO PRINT

61

CHECK URL SITE TO SEE IF CHANGES
HAVE BEEN MADE TO THE CONTENTS

62

CHANGE?

63

NO

YES

PRINT URL SITE

64

SHOW DIALOG
BOX

65

PRINT?

66

NO

YES

PRINT URL SITE

67

END

68

FIGURE 6

THE SELECTED URL PAGE HAS NOT
CHANGED SINCE LAST PRINTED

PRINT ANYWAYS?

YES   CANCEL

15   71

URL —40
PRINT
LABEL —41

—10

FIGURE 7

COMPUTER SCREEN
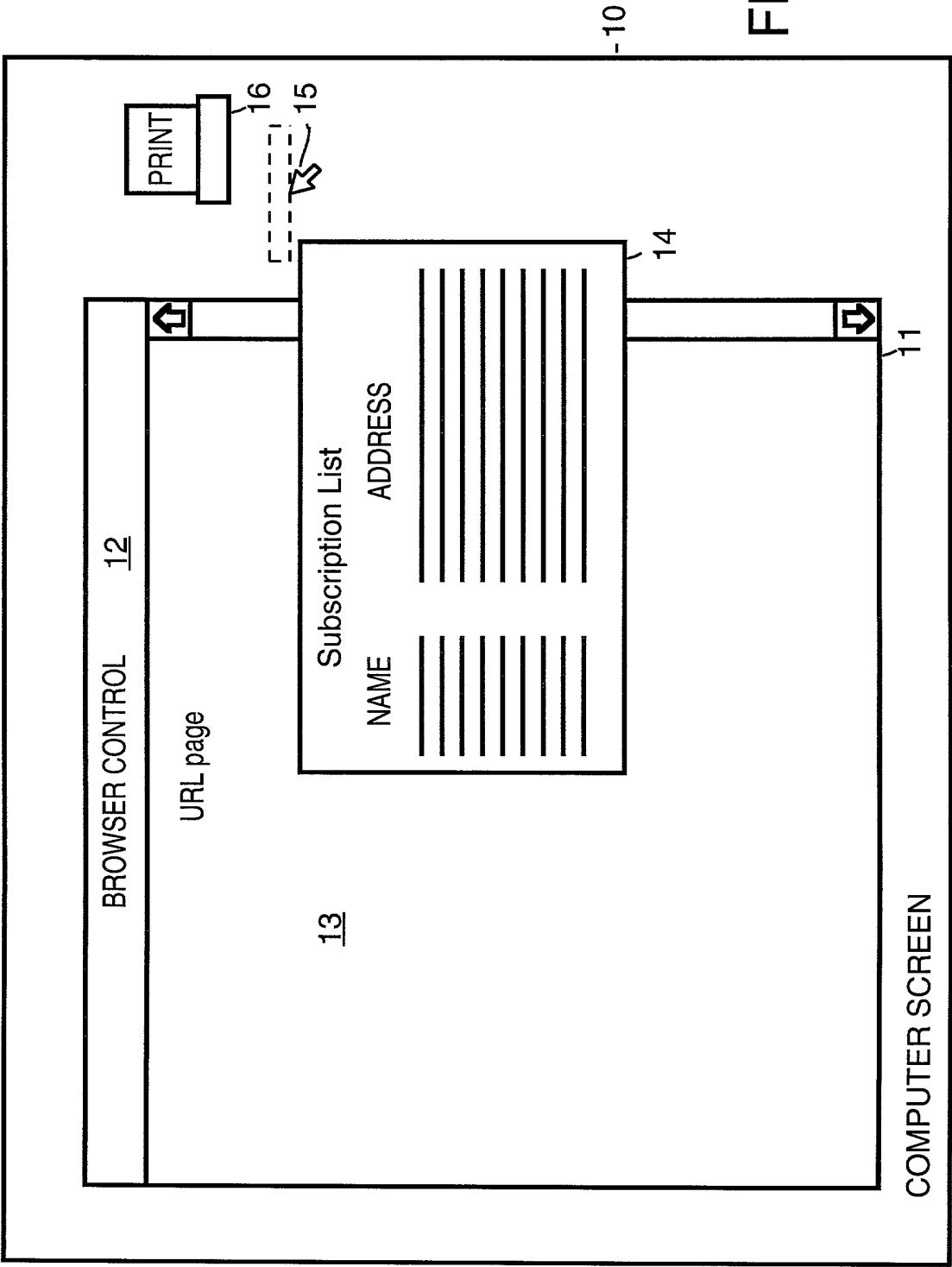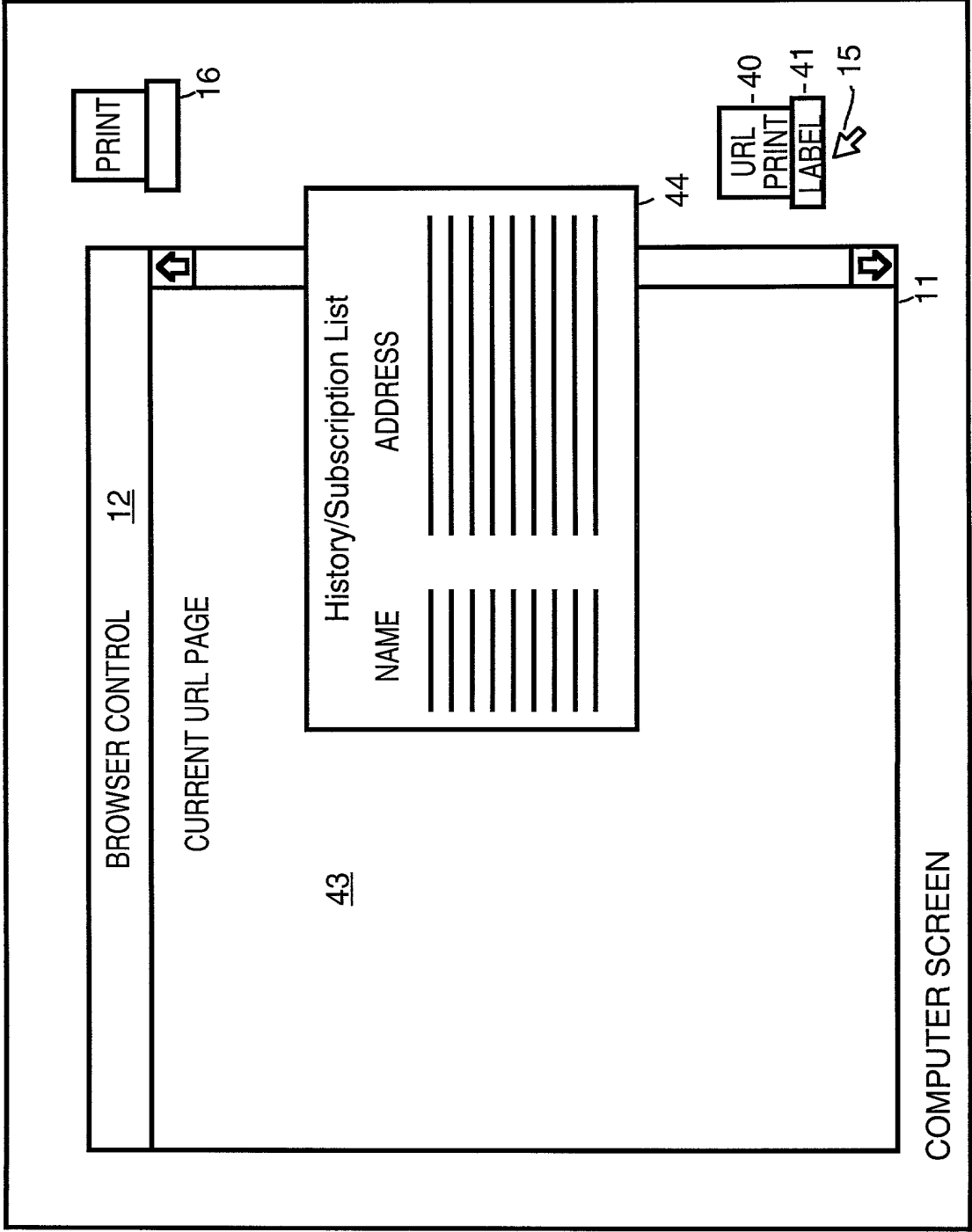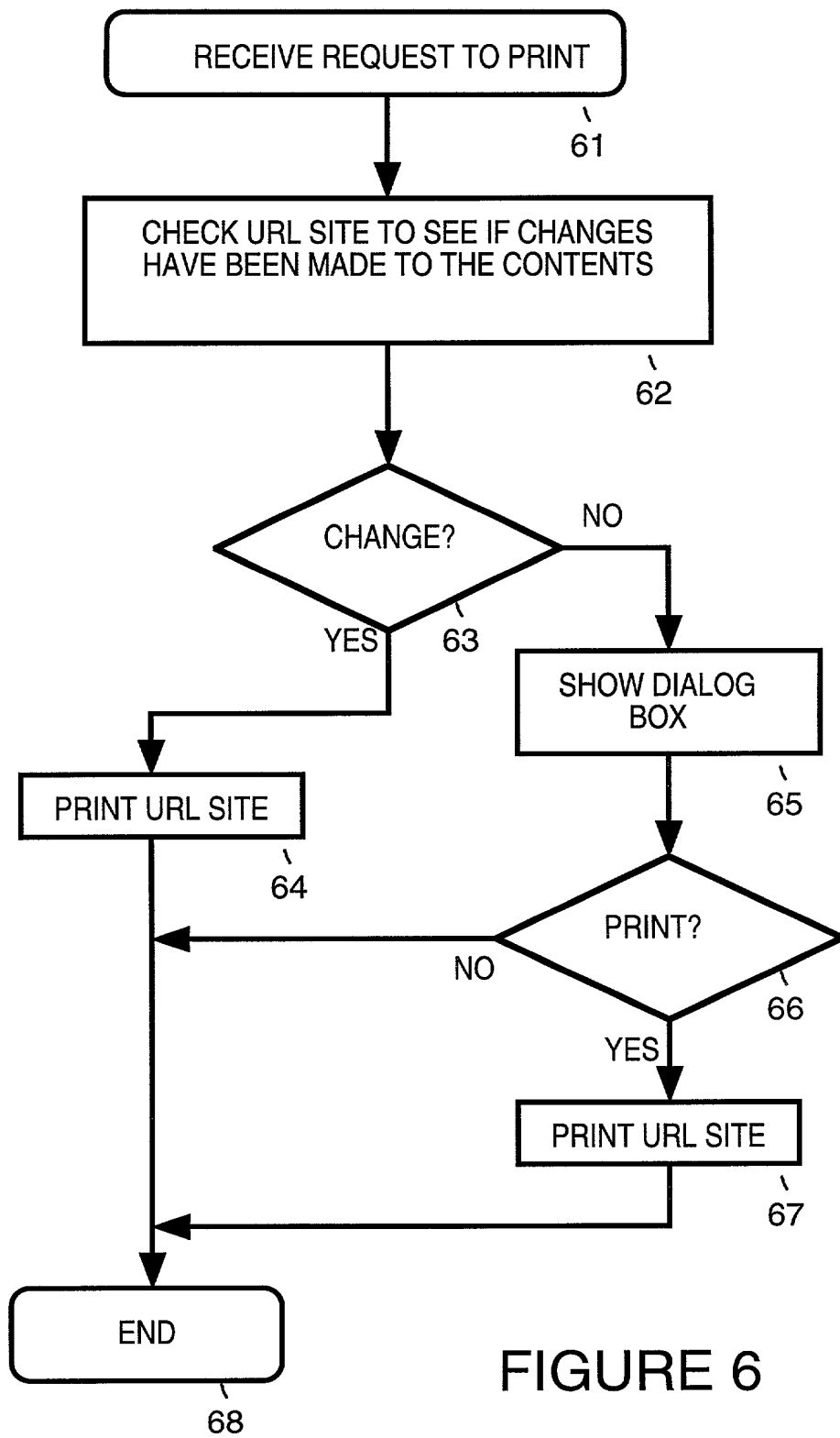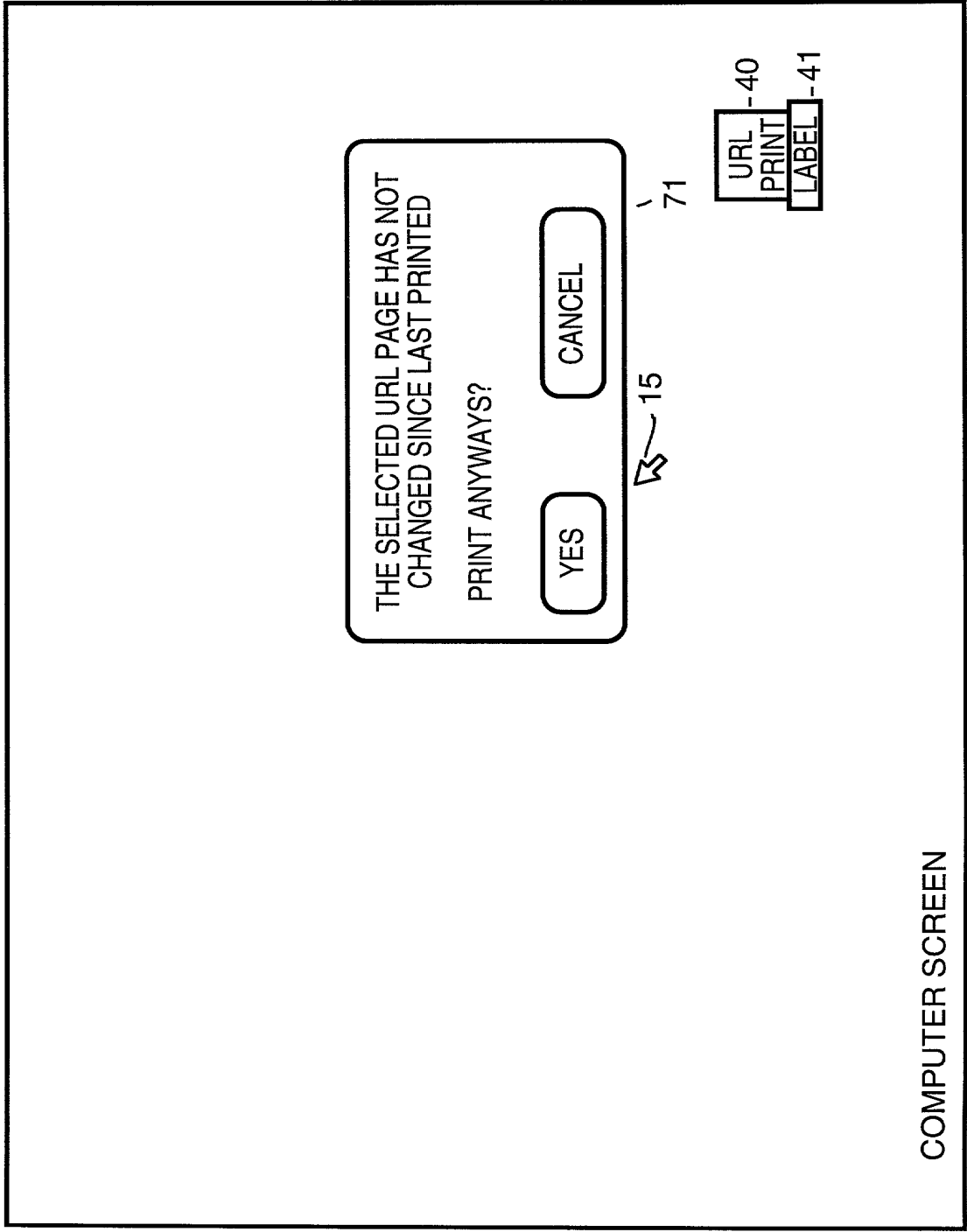
DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION	ATTORNEY DOCKET NO. 10002549-1

As a below named inventor, I hereby declare that:

My residence/post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Direct Printing Of Contents Of A Universal Resource Locator

the specification of which is attached hereto unless the following box is checked:

( ) was filed on _____ as US Application Serial No. or PCT International Application Number _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defined in 37 CFR 1.56.

Foreign Application(s) and/or Claim of Foreign Priority

I hereby claim foreign priority benefits under Title 35, United States Code Section 119 of any foreign application(s) for patent or inventor(s) certificate listed below and have also identified below any foreign application for patent or inventor(s) certificate having a filing date before that of the application on which priority is claimed:

COUNTRY	APPLICATION NUMBER	DATE FILED	PRIORITY CLAIMED UNDER 35 U.S.C. 119	
			YES: ___	NO: ___
			YES: ___	NO: ___

Provisional Application

I hereby claim the benefit under Title 35, United States Code Section 119(e) of any United States provisional application(s) listed below:

APPLICATION SERIAL NUMBER	FILING DATE

U. S. Priority Claim

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NUMBER	FILING DATE	STATUS (patented/pending/abandoned)

POWER OF ATTORNEY:

As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

Customer Number | 022879

Place Customer Number Bar Code Label here

Send Correspondence to: HEWLETT-PACKARD COMPANY Intellectual Property Administration P.O. Box 272400 Fort Collins, Colorado 80528-9599	Direct Telephone Calls To: Raymond A Jenski (541) 715-8441

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of Inventor: **Kenneth W. Crangle**   Citizenship: **US**

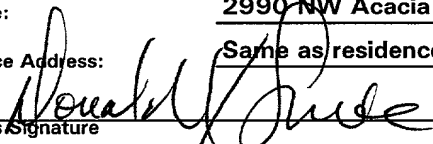Residence: **4424 NE Bramblewood Court Albany, OR 97321**
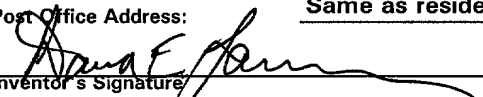
Post Office Address: **Same as residence**

Inventor's Signature _____   Date 9/8/00

Full Name of # 2 joint inventor: **Donald X. Smith, II**   Citizenship: **US**

Residence: **2990 NW Acacia Place, Corvallis, OR 97330**

Post Office Address: **Same as residence**

Inventor's Signature _____   Date **9/11/00**

Full Name of # 3 joint inventor: **Dana E. Laursen**   Citizenship: **US**

Residence: **2849 N W Rolling Green Dr Corvallis, OR 97330**

Post Office Address: **Same as residence**

Inventor's Signature _____   Date **10/3/00**

Full Name of # 4 joint inventor: **Theodore E. Ransom**   Citizenship: **US**

Residence: **4140 NW Pinecone Pl Corvallis, OR 97330**

Post Office Address: **Same as residence**

Inventor's Signature _____   Date **9/8/00**

Full Name of # 5 joint inventor: _____   Citizenship: _____

Residence: _____

Post Office Address: _____

Inventor's Signature _____   Date _____

Full Name of # 6 joint inventor: _____   Citizenship: _____

Residence: _____

Post Office Address: _____

Inventor's Signature _____   Date _____

Full Name of # 7 joint inventor: _____   Citizenship: _____

Residence: _____

Post Office Address: _____

Inventor's Signature _____   Date _____

Full Name of # 8 joint inventor: _____   Citizenship: _____

Residence: _____

Post Office Address: _____

Inventor's Signature _____   Date _____